

**A NEW CHRYSOBOTHRIS FROM EASTERN RED CEDAR, JUNIPERUS VIRGINIANA**

(COLEOPTERA, BUPRESTIDAE)

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The *Chrysobothris* described below is of interest because it illustrates a typical and yet puzzling example of two very closely related species occurring on a mutually common host (*Juniperus virginiana* L.) in two widely separated areas. This brings up the question of whether the eastern form is merely an isolated or intergrading variation of a widely ranging species. More intensive collecting throughout the Gulf Coast states would help clarify this problem.

*Juniperus virginiana* L. ranges from Maine to North Dakota, south through the central and eastern states to central Georgia, and across the northern sections of the Gulf Coast to central Texas. Along the Gulf Coast, across north Florida, and in the coastal areas of Georgia and South Carolina it is replaced by Southern Red Cedar (*J. siliciola* Small). In the southwest it is replaced by several species of junipers including Rocky Mountain Red Cedar (*J. scopulorum* Sarg.), which ranges from Washington south to central Arizona and New Mexico, Alligator Juniper (*J. deppeana* Steud.), which occurs from central Arizona to western Texas, and Utah Juniper (*J. osteosperma* Torr.), which occurs mainly in Utah, Nevada, and northern Arizona.

The species of *Chrysobothris* described here is known only from the type locality in North Carolina, from *J. virginiana*; its nearest relative, *C. texana* Le Conte, has not been recorded east of Texas and Nebraska and is evidently confined to the more arid area west of the Mississippi River. *C. texana* has been recorded from Eastern Red Cedar, Utah Juniper, Rocky Mountain Red Cedar, and Arizona Cypress (*Cupressus arizonica* Greene).

Due to the structural differences noted in the description, and the apparent isolated distributions, the author believes that two very close yet distinct species are represented. The eastern species is described below.

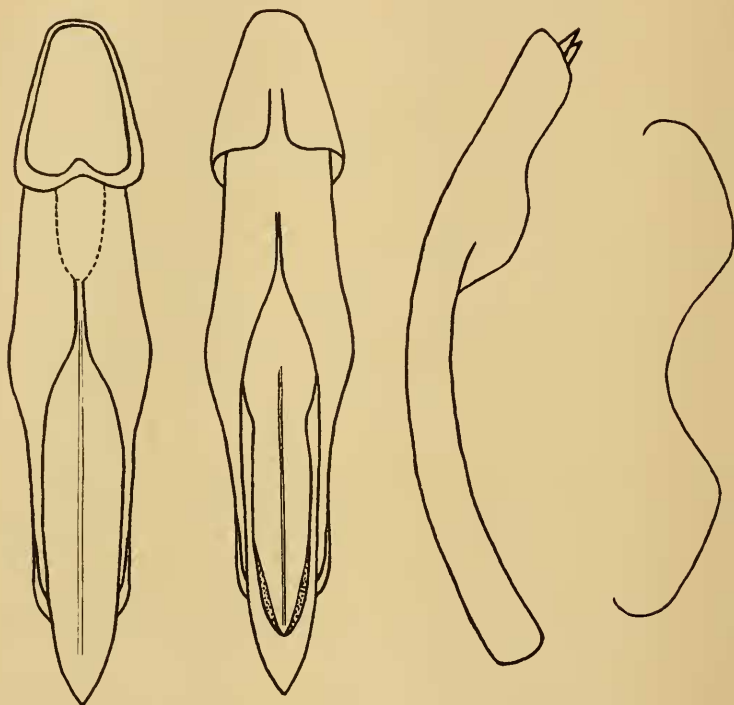
***Chrysobothris neotexana*, new species**

*Holotype Male*.—Form small, moderately elongate, shining; antennae black; head and pronotum black with cupreous reflections, more pronounced on head; elytra black with greenish reflections in certain light; ventral surface black.

Head black with strong reddish cupreous reflections; front converging dorsally, twice as wide at base of eye as at occiput, slightly convex, slightly depressed above clypeus, two small callosities in middle, surface heavily punctate, punctations broad and shallow, densely clothed with long hairs, a smooth longitudinal carina on occiput bearing a prominent longitudinal groove; clypeus shallowly, broadly emarginate; antenna with first segment as long as following two united, segments subtruncate beginning with the fourth.

Pronotum black with faint reddish cupreous reflections, 1.6 times wider than

long, slightly wider anteriorly; base arcuately emarginate with a well produced median lobe; lobe broadly rounded at apex; anterior margin nearly straight; anterior median lobe faintly indicated; disk moderately convex, a vague depression on either side near lateral margins, moderately punctate in center becoming confluent punctate near lateral margins, punctations broad and shallow, particularly near lateral margins.



*Chrysobothris neotexana*, new species. Male genitalia, dorsal and ventral views; fore tibia and elypeus. Drawings from holotype.

Elytra moderately elongate, 1.8 times longer than wide, 1.3 times wider than pronotum, sides nearly parallel, posterior third arcuately converging to broadly rounded apex; lateral margins serrate; basal depression broad and deep; humeral depression broad and shallower than basal; heavily punctate between costae; four longitudinal costae on each elytron, the first extending from the base to apex; strongly elevated in posterior half; second costa extending from between basal and humeral depressions, joining fourth costa near apex, strongly interrupted at points one and two-thirds of its length; third costa extending from humerus, converging to meet second costa, interrupted near the middle; fourth costa extending from humerus to apex paralleling lateral margin of elytron.

Ventral aspect: Prosternum densely punctate, fairly smooth at center, moderately clothed with long hairs; anterior femur with a single large obtuse tooth,

heavily dentate on outer margin; anterior tibia moderately arcuate with a dilation near apex; middle and hind tibiae simple; abdomen moderately punctate, clothed with short white hairs; poorly developed lateral callosities present; last visible sternite broadly and shallowly emarginate with a serrate submarginal ridge.

*Allotype Female*.—Differs from male in having less arcuate fore tibia, which lacks an apical expansion, by having prosternum and frons less hairy, and by having last visible abdominal sternite more narrowly notched.

*Variations*.—One paratype male lacks the expansion on the fore tibia, otherwise no noteworthy variations can be seen in the type series. The length varies from 7.4 mm to 9.1 mm.

Described from 27 males (one type) and 6 females collected by the author at Charlotte, North Carolina. Holotype, allotype and 28 paratypes collected on May 31, 1953; 2 paratypes on June 14, 1953; and 1 paratype on July 5, 1953. Holotype deposited in the U. S. National Museum (No. 62301), paratypes in the collection of H. F. Howden, N. C. State College; the allotype and the remaining paratypes are retained in the writer's collection.

*Host*.—The type series was taken in a cut over second growth pine woods on recently cut logs of Eastern Red Cedar approximately four to eight inches in diameter. All specimens were taken on logs and none were observed or collected on the smaller branches in nearby brush piles. Apparently this species breeds in the main trunk of the tree and not the branches.

The writer did not observe oviposition on cedar but he assumes that this is the host as no specimens were observed on any other species of tree in the immediate area.

*Comparison*.—*Chrysobothris neotexana* will key to *C. texana* Le Conte in Fisher's key (1942) and appears to be very closely related to that species. It can be separated from *C. texana* by its uniformly smaller size, more acuminate genitalia, and by the lack of a strong constriction behind the dilation on the fore tibia of the male.

#### REFERENCE

- Fisher, W. S., 1942. A revision of the North American species of buprestid beetles belonging to the tribe Chrysobothrini. U.S.D.A. Misc. Publ. No. 470, 274 pp.

#### BOOK NOTICE

**THE BLACK FLIES (DIPTERA, SIMULIIDAE) OF GUATEMALA AND THEIR ROLE AS VECTORS OF ONCHOCERCIASIS**, by Herbert T. Dalmat, Laboratory of Tropical Diseases, National Institutes of Health. vi + 425 pp., 44 plates, bibliography, index. Smithsonian Misc. Coll., Vol. 125, no. 1 (Publication 4173), Smithsonian Institution, Washington 25, D. C. 1955.

A comprehensive review of studies accomplished by the author who worked in an endemic zone of onchocerciasis in Guatemala from 1947 to 1953.—ED.